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RFIC Plenary

Chair: Danilo Manstretta, Università di Pavia — Co-Chair: François Rivet, Université de Bordeaux
Ballroom AB, 17:30–19:00, Sunday, 16 June 2024

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Peter Vetter, Nokia Bell Labs, USA 

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18:30

CMOS Technology Evolution for Revolutionary Impact
Tsu-Jae King Liu, University of California, Berkeley, USA 




RMo1A: mm-Wave Transmitters and Receivers

Chair: Giuseppe Gramegna, imec, Belgium — Co-Chair: Magnus Wiklund, BeammWave, USA
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A 60-GHz Positive-Feedback-Based Transmitter Front-End with 22.8% PAE_{max} in 28-nm Bulk CMOS for Inter-Satellite Communications
Kaijie Ding¹, Dusan Milosevic¹, Vojkan Vidjokovic¹, Khaled Khalaf², Mark Bentum¹, Peter Baltus¹
¹Technische Universiteit Eindhoven, The Netherlands  ; ²Pharrowtech, Belgium 

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Huiyan Gao¹, Hang Lu¹, Shaogang Wang¹, Nayu Li¹, Gaopeng Chen¹, Chunyi Song¹, Yen-Cheng Kuan², Qun Jane Gu³, Zhiwei Xu¹
¹Zhejiang University, China  ; ²NYCU, Taiwan  ; ³University of California, Davis, USA 

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Shahabeddin Mohin, Soroush Araei, Mohammad Barzqari, Negar Reiskarimian, MIT, USA 

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Jiangbo Chen¹, Shengjie Wang¹, Jiabing Liu¹, Qizhou Yang¹, Quanyong Li¹, Hui Nie¹, Qun Jane Gu², Chunyi Song¹, Na Yan³, Zhiwei Xu¹

¹Zhejiang University, China ; ²University of California, Davis, USA ; ³Fudan University, China 

RMO1B: Advanced Packaging Enabling Heterogeneous Integration of SiGe HBT and III-V mm-Wave ICs

Chair: Frédéric Ganesello, STMicroelectronics, France — Co-Chair: Harshpreet Bakshi, Texas Instruments, USA
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Dingyuan Zeng¹, Haoshen Zhu¹, Qi Cai², Guangxu Shen², Outong Gao¹, Wenquan Che¹, Quan Xue¹

¹SCUT, China ; ²NJUPT, China 

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Justin J. Kim, Michael D. Hodge, Mark R. Soler, Florian Herrault, Daniel S. Green, James F. Buckwalter, PseudolithiC, USA 

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Maya Alawar¹, Victor Fiorese², Sylvie Lépilliet¹, Daniel Gloria², Guillaume Ducournau¹, Emmanuel Dubois¹

¹IEMN (UMR 8520), France ; ²STMicroelectronics, France 

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Arul Balasubramaniyan¹, Xuemei Hui², Abdellatif Bellaouar¹, Miguel Meza Campos¹, Apurv Bharadwaj¹, Elan Veeramani¹, Shafi Syed¹

¹GlobalFoundries, USA ; ²GlobalFoundries, China 

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A Reconfigurable Compact Multiband RF Bi-Directional Coupler for Sub-6GHz RF Front-Ends in RF SOI CMOS Switch Technology








Ting-Li Hsu¹, Amelie Hagelauer¹, Valentyn Solomko²

¹Technische Universität München, Germany ; ²Infineon Technologies, Germany 

RMo1C: Unleashing RF Systems: From 5G to Low-Power Sensing

Chair: Pierluigi Nuzzo, University of Southern California, USA — Co-Chair: Yao-Hong Liu, imec, The Netherlands

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Jing-Ren Yan¹, Yao-Wei Huang¹, Wei-Jen Lai², Jen-Hao Liao², Ching-Chun Lin², Yu-Te Liao¹
¹NYCU, Taiwan ; ²Novatek Microelectronics, Taiwan 
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Seung-Beom Ku¹, Jinhyoung Kim², Kwon-Hong Lee¹, Han-Sol Lee¹, Kyeongho Eom¹, Joonghoon Kang¹, Hyungjin Jung¹, Cheolung Cha², Hyung-Min Lee¹
¹Korea University, Korea ; ²KETI, Korea 
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Caglar Ozdag¹, Arun Paidimarri¹, Masayuki Yoshiyama², Yuichiro Yamaguchi², Yujiro Tojo², Bodhisatwa Sadhu¹
¹IBM T.J. Watson Research Center, USA ; ²Fujikura, Japan 

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Hamid Jafari Sharemi, Aydin Babakhani, University of California, Los Angeles, USA 

RMo2A: mm-Wave Transceivers and RF Techniques

Chair: Abhishek Agrawal, Intel, USA — Co-Chair: Andrea Bevilacqua, Università di Padova, Italy

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Jian Zhang¹, Ming Zhai¹, Dawei Wang¹, Xiangjie Yi¹, Wei Zhu², Yan Wang¹
¹Tsinghua University, China  ; *²BIT, China* 
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Ting-Li Hsu¹, Valentyn Solomko², Amelie Hagelauer¹
¹Technische Universität München, Germany  ; *²Infineon Technologies, Germany* 

RMo2B: High-Performance Multi-Mode, Multi-Core Oscillators

Chair: Andrea Mazzanti, Università di Pavia, Italy — Co-Chair: Bichoy Bahr, Texas Instruments, USA

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Hyunjoon Kim, Sangmin Kim, Sanggeun Jeon, Korea University, Korea 
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Qiyao Jiang¹, Jun Yin¹, Quan Pan², Rui P. Martins¹, Pui-In Mak¹
¹University of Macau, China  ; *²SUSTech, China* 
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Shiwei Zhang, Wei Deng, Haikun Jia, Baoyong Chi, Tsinghua University, China 
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Zhenhua Jia¹, Dawei Ye²
¹Fudan University, China  ; *²HUST, China* 

RMo2C: Interference Resilient and Energy Efficient Transmitters and Receivers

Chair: Chun-Huat Heng, National University of Singapore, Singapore — Co-Chair: Justin Wu, AmLogic, Taiwan

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Haoyu Bai, Dong Wang, Keer Gao, Jiaqi He, Jiazheng Zhou, Junhua Liu, Huailin Liao, Peking University, China **A**
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Jamie C. Ye, Alain Antón, Russ H. Huang, Sanaz Sadeghi, Alyosha C. Molnar, Cornell University, USA **A**
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Xuansheng Ji, Jiahao Zhao, Woogeun Rhee, Zhihua Wang, Tsinghua University, China **A**
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Trevor J. Odelberg, David D. Wentzloff, University of Michigan, USA **A**

RMo3A: mm-Wave Power Amplifiers

Chair: Jane Gu, University of California, Davis, USA — Co-Chair: Gernot Hueber, United Micro Technology, Austria






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Mengqi Cui, Jens Wagner, Frank Ellinger, Technische Universität Dresden, Germany **A**
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Edward Liu¹, Han Zhou², Christian Fager², Hua Wang¹
¹ETH Zürich, Switzerland **A** ; ²Chalmers University of Technology, Sweden **A**
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- A 22–44GHz 28nm FD-SOI CMOS 5G Doherty Power Amplifier with Wideband PAE_{6dB}PBO Enhancement and 3:1 VSWR Resiliency**
Gwennaël Diverrez¹, Eric Kerherve¹, Magali De Matos¹, Andreia Cathelin²
¹IMS (UMR 5218), France **A** ; ²STMicroelectronics, France **A**
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Haoqi Qin¹, Junjie Gu¹, Hao Xu¹, Zhiwei Xu², Pengcheng Jia³, Na Yan¹
¹Fudan University, China **A** ; ²Zhejiang University, China **A** ; ³Starway Communication, China **A**
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Jingye Zhang¹, Jiawen Chen², Taotao Xu¹, Pei Qin¹, Xiang Yi¹, Liang Wu³, Haoshen Zhu¹, Wenquan Che¹, Quan Xue¹
¹SCUT, China **A** ; ²University College Dublin, Ireland **A** ; ³CUHK-Shenzhen, China **A**

RMo3B: RF and mm-Wave Frequency Multipliers

Chair: Fa Foster Dai, Auburn University, USA — Co-Chair: Salvatore Finocchiaro, Qorvo, USA




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Changwenquan Song, Chen Yu, Liang Wu, CUHK-Shenzhen, China 
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Qingfan Zeng, Jingzhi Zhang, Yiming Yu, Huihua Liu, Yunqiu Wu, Chenxi Zhao, Kai Kang, UESTC, China 
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Zheng Yan, Jixin Chen, Zhe Chen, Zekun Li, Rui Zhang, Rui Zhou, Peigen Zhou, Wei Hong, Southeast University, China 
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Yifan Ding, Yizhu Shen, Zhen Lin, Zhenghuan Wei, Yun Qian, Sanming Hu, Southeast University, China 



RMo3C: Wideband Reconfigurable Beamforming Arrays

Chair: Emanuel Cohen, Technion, Israel — Co-Chair: Hao Gao, Technische Universiteit Eindhoven, The Netherlands

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Xianhu Luo¹, Yunbo Rao¹, Xu Cheng¹, Binbin Cheng¹, Hao Yang¹, Renai Chen¹, Yang Yu¹, Jiangan Han¹, Changxuan Han², Liang Zhang¹, Yang Tang¹, Xianjin Deng¹, Hao Gao³
¹CAEP, China ; ²UESTC, China ; ³Technische Universiteit Eindhoven, The Netherlands 
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Hang Lu¹, Nayu Li¹, Huiyan Gao¹, Botao Yang¹, Xuanyu He¹, Shaogang Wang¹, Yiwei Liu¹, Gaopeng Chen¹, Yen-Cheng Kuan², Xiaokang Qi¹, Chunyi Song¹, Qun Jane Gu³, Zhiwei Xu¹
¹Zhejiang University, China ; ²NYCU, Taiwan ; ³University of California, Davis, USA 
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¹Southeast University, China ; ²Purple Mountain Laboratories, China 





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Gunwoo Park, Hyunjoon Kim, Sanggeun Jeon, Korea University, Korea 

RMo4B: High Performance RF and mm-Wave CMOS Frequency Synthesis

Chair: *Andreia Cathelin, STMicroelectronics, France* — Co-Chair: *Xiang Gao, Zhejiang University, China*







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Seohee Jung¹, Jaeho Kim¹, Joeun Bang¹, Jaehyouk Choi²
¹KAIST, Korea ; ²Seoul National University, Korea 
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Yi Liu¹, Zixi Jing¹, Zhiyu Liu¹, Chi Chung Yip¹, Zhirui Zong², Howard Cam Luong¹
¹HKUST, China ; ²HKUST(GZ), China 
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Yi Liu¹, Zixi Jing¹, Zhiyu Liu¹, Wen Yang¹, Chi Chung Yip¹, Liang Wu², Howard Cam Luong¹
¹HKUST, China ; ²CUHK-Shenzhen, China 
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Wen Chen, Yiyang Shu, Xun Luo, UESTC, China 

RMo4C: Wireline and Localization Systems

Chair: *Ahmed Elkholy, Broadcom, USA* — Co-Chair: *Sajjad Moazeni, University of Washington, USA*










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Mir H. Mahmud¹, Hasan Al-Rubaye², Gabriel M. Rebeiz¹
¹University of California, San Diego, USA ; ²Broadcom, USA 
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¹Washington State University, USA ; ²University of California, Los Angeles, USA 
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Chair: Alexandre Siligaris, CEA-Leti, France — Co-Chair: Travis M. Forbes, Sandia National Laboratories, USA


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P. Toth¹, P.S. Eugene¹, A. Meyer¹, K. Yamashita², S. Halama³, M. Duwe³, H. Ishikuro², C. Ospelkaus³, Vadim Issakov¹
¹Technische Universität Braunschweig, Germany  ; ²Keio University, Japan  ; ³Leibniz Universität Hannover, Germany 
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Mahesh Kumar Chaubey¹, Yin-Cheng Chang², Po-Chang Wu², Hann-Huei Tsai², Shawn S.H. Hsu¹
¹National Tsing Hua University, Taiwan  ; ²NARLabs-TSRI, Taiwan 
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A Study of Total Dose Radiation Effects in Ka-Band Fractional-N PLLs in 45nm SiGe BiCMOS
David Dolt¹, Lauren Pelan², Samantha Mcdonnell², Shane Smith³, Trevor Dean², David Reents¹, Will Gouty², Tony Quach², Waleed Khalil³, Samuel Palermo¹
¹Texas A&M University, USA  ; ²AFRL, USA  ; ³Ohio State University, USA 

RTu1C: Digital Power Amplifier and Transmitter Systems




Chair: Xun Luo, UESTC, China — Co-Chair: Zhiming Deng, MediaTek, USA

152AB, 08:00–09:40, Tuesday, 18 June 2024

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08:00
A Watt Level, 5–7GHz All Digital Polar TX Based on 3.3V Switched Capacitor Digital PA in 16nm Fin-FET for Wi-Fi7 Applications
Naor R. Shay¹, Elad Solomon², Limor Zohar², Assaf Ben-Bassat², Eran Socher¹, Ofir Degani¹
¹Tel Aviv University, Israel  ; ²Intel, Israel 
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RTu1C-2
08:20
A SAW-Less $3F_{LO}$ -Suppression RF Transmitter with a Transformer-Based N-Path Switched-Capacitor Modulator Achieving -157.6dBc/Hz Output Noise and -61dBc CIM₃
Gengzhen Qi¹, Haonan Guo¹, Pui-In Mak², Yunchu Li¹
¹Sun Yat-sen University, China  ; ²University of Macau, China 
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RTu1C-3
08:40
A 32.3dBm Quadrature Complex Domain Doherty Power Amplifier Based on Switched Constant-Current and Symmetrical Transformer Achieving 21.6% Average Power-Added Efficiency
Tao Wang, Lingyun Shi, Di Hua, Peng Cao, Jiawei Xu, Zhiliang Hong, Fudan University, China 
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RTu1C-4
09:00
A 5G FR2 n260/n259 Phased-Array Transmitter Front-End IC in 28-nm CMOS FD-SOI with 3-Stack Power Amplifier Employing OPA-Based Bias Scheme and Cross-Tied Inductor Topology
Jongwon Yun¹, Hongkie Lim¹, Jaeyeon Jeong¹, Iljin Lee¹, Doyoon Kim¹, Kyunghwan Kim¹, Han-Woong Choi¹, Geonho Park¹, Goeun Baek¹, Eun-Taek Sung¹, Ajaypat Jain², Foad A. Malekzadeh², Venumadhav Bhagavatula², Ivan S.-C. Lu², Sangwon Son², Hyun-Chul Park¹, Joonhoi Hur¹, Sangmin Yoo¹
¹Samsung, Korea  ; ²Samsung, USA 

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RTu1C-5
09:20

A 0.48mm² Sub-2.4GHz Transceiver with Reused Matching Network and Duty-Cycle Controlled Class-E PA for Medical Band


Heng Huang¹, Xiliang Liu², Zijian Tang³, Wei Song³, Yuan Ma³, Yuwei Zhang², Xiaoyan Ma², Milin Zhang³, Jintao Wang³, Kai Lu¹, Zhihua Wang³, Guolin Li³
¹NUDT, China ; ²Beijing Ningju Technology, China ; ³Tsinghua University, China 

RTu2B: Silicon Wireless Systems in the D-Band and Beyond

Chair: Minoru Fujishima, Hiroshima University, Japan — Co-Chair: Shahriar Shahramian, Nokia Bell Labs, USA
151AB, 10:10–11:50, Tuesday, 18 June 2024


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RTu2B-1
10:10

A 210-to-250GHz Sliding-IF Frequency-Interleaved Transceiver with On-Chip Bow-Tie Antenna and 4th-Order FIR-Embedded Digital Modulator

Linjun Gu, Wei Deng, Junlong Gong, Taikun Ma, Haikun Jia, Qixiu Wu, Jiamin Xue, Dongfang Li, Hongzhuo Liu, Yaqian Sun, Baoyong Chi, Tsinghua University, China 


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RTu2B-2
10:30

A 2×40Gb/s Ultra-Wideband 131–173GHz Dual Receiver for Point-to-Point Communication Systems with NF of 5.7dB in RFSOI

Ahmed Afifi, Amr Ahmed, Gabriel M. Rebeiz, University of California, San Diego, USA 

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RTu2B-3
10:50

A 112.64-Gb/s CMOS D-Band Channel-Aggregation RX System-in-Package

Abdelaziz Hamani, Jose Luis Gonzalez-Jimenez, Alexandre Siligaris, Francesco Foglia-Manzillo, Cedric Dehos, Jean-Baptiste David, Nicolas Cassiau, Antonio Clemente, CEA-Leti, France 










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RTu2B-4
11:10

A D-Band Scalable 128-Channel Dual-Polarized Receive Phased-Array with On-Chip Down Converters for 2×2 MIMO Achieving 2×42Gbps

Minjae Jung, Linjie Li, Amr Ahmed, Omar Hassan, Gabriel M. Rebeiz, University of California, San Diego, USA 







RTu2C: Power Amplifiers for Satellite Applications

Chair: Tolga Dinc, Texas Instruments, USA — Co-Chair: Aritra Banerjee, University of Illinois at Chicago, USA
152AB, 10:10-11:50, Tuesday, 18 June 2024

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10:10
- An Efficient, High Power Q-Band SiGe HBT Power Amplifier with a Compact Four-Way Wilkinson Power Combiner Balun for Emerging Very Low-Earth-Orbit SATCOM**
Hanjung Lee, Insu Han, Jaehyeon Hwang, Inchan Ju, Ajou University, Korea 
- PAGE 295
RTu2C-2
10:30
- A Compact, Highly Linear Ku-Band SiGe HBT Power Amplifier Using Shared Single Center-Tap Four-Way Output Transformer Balun for Emerging Low Earth Orbit SATCOM Phased-Array Transmitter**
Byeongcheol Yoon¹, Insu Han², Junghyun Kim¹, Inchan Ju²
¹Hanyang University, Korea  ; ²Ajou University, Korea 
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RTu2C-3
10:50
- An Efficient Ku-Band Two-Way Vertical-Like Power-Combining Power Amplifier Using Merged Inter-Stage Transformers Achieving 23–23.4dBm P_{sat} and 45.2–46.6% Peak PAE in 65nm CMOS**
Joon-Hyung Kim¹, Jeong-Taek Lim¹, Jae-Eun Lee¹, Jae-Hyeok Song¹, Jeong-Taek Son¹, Min-Seok Baek¹, Eun-Gyu Lee¹, Sunkyu Choi¹, Han-Woong Choi², Seong-Mo Moon³, Dongpil Chang³, Choul-Young Kim¹
¹Chungnam National University, Korea  ; ²Samsung, Korea  ; ³ETRI, Korea 
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11:10
- A K-Band CMOS Power Amplifier Using an Analog Predistortion Linearizer with 22.1dBm P_{sat} and 0.9° AM-PM Distortion**
Junhan Lim¹, Wonseob Lee², Seong-Mo Moon¹, Euijin Oh², Seunghun Wang¹, Dongpil Chang¹, Jinseok Park²
¹ETRI, Korea  ; ²Chonnam National University, Korea 
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RTu2C-5
11:30
- A 2–18GHz Frequency Reconfigurable Nonuniform Distributed Power Amplifier with 13.3W Average Power and 39% Average Efficiency**
Shu Ma, Xinyan Li, Ze Yu, Dexin Shi, Xiaochen Tang, Yong Wang, UESTC, China 

RTu3B: Silicon-Based Low-Noise Amplifiers and Mixers

Chair: Tong Zhang, Google, USA — Co-Chair: Hsieh-Hung Hsieh, TSMC, Taiwan
151AB, 13:30-15:10, Tuesday, 18 June 2024

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RTu3B-1
13:30
- A 4.4-mW 19–46-GHz Low-Noise Amplifier with Pole-Converging Gain Flattening and Triple-Resonance Input Matching**
Jiahan Fu, Changwenquan Song, Yihui Wang, Liang Wu, CUHK-Shenzhen, China 
- PAGE 315
RTu3B-2
13:50
- A Compact 28/39GHz Dual-Band Concurrent/Band-Switching LNA for 5G Multi-Band Multi-Stream Applications**
Depeng Cheng¹, Qin Chen¹, Jing Feng¹, Xin Chen¹, Xujun Ma², Lianming Li¹
¹Purple Mountain Laboratories, China  ; ²IP Paris, France 
- PAGE 319
RTu3B-3
14:10
- A High-Gain D-Band LNA with Compact Gm-Boosting Core Based on Slow-Wave Feedback Achieving 6.1dB NF in 40nm CMOS**
Yun Qian, Xinge Huang, Yizhu Shen, Yifan Ding, Zhenghuan Wei, Qunfei Han, Sanming Hu, Southeast University, China 
- PAGE 323
RTu3B-4
14:30
- A Multi-Band and High-IRR Down-Conversion Mixer for 5G NR FR2 Using Compact Transformer-Based Mutual-Image-Rejection Filter**
Haipeng Duan, Qin Chen, Xu Wu, Dongming Wang, Lianming Li, Xiaohu You, Southeast University, China 
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14:50
- A Compact Ultra-High-Linearity 7-to-20GHz Passive Mixer Achieving up to 37dBm IIP3 and 25.1dBm IP1dB in 45nm CMOS SOI**
Omar Hassan, Amr Ahmed, Gabriel M. Rebeiz, University of California, San Diego, USA 

RTu3C: D-Band and THz Transmitters

Chair: Vadim Issakov, Technische Universität Braunschweig, Germany

Co-Chair: Mona M. Hella, Rensselaer Polytechnic Institute, USA

152AB, 13:30-15:10, Tuesday, 18 June 2024

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13:30



A 360GHz Single-Element Multi-Mode Orbital Angular Momentum Cavity Antenna-Based Transmitter in 90nm SiGe BiCMOS




Wei Sun, Sidharth Thomas, Aydin Babakhani, University of California, Los Angeles, USA 


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RTu3C-2
13:50

A 300-GHz-Band 40-Gb/s 2D Phased-Array CMOS Transmitter with Near-Half-Wave Antenna Pitch

Kyoya Takano¹, Shun Beppu¹, Hayato Yagi¹, Yoshiki Sugimoto², Kunio Sakakibara², Shinsuke Hara³, Mohamed H. Mubarak³, Akifumi Kasamatsu³, Shunichi Kubo⁴, Kosuke Katayama⁵, Satoshi Tanaka⁶, Takeshi Yoshida⁶, Shuhei Amakawa⁶, Minoru Fujishima⁶


¹Tokyo University of Science, Japan  ; ²Nagoya Institute of Technology, Japan  ;

³NICT, Japan  ; ⁴THine Electronics, Japan  ; ⁵Tokuyama KOSEN, Japan  ;

⁶Hiroshima University, Japan 

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14:10



A 110-to-170-GHz OOK Transmitter with 40-Gb/s Data Rate and 40-dB On-Off Ratio in 28-nm CMOS

Chun Yang, Dawei Tang, Peigen Zhou, Zhe Chen, Jixin Chen, Wei Hong, Southeast University, China 

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RTu3C-4
14:30

A CMOS Fully Integrated 120-Gbps RF-64QAM F-Band Transmitter with an On-Chip Antenna for 6G Wireless Communication

Zisong Wang¹, Huan Wang², Youssef O. Hassan¹, Payam Heydari¹

¹University of California, Irvine, USA  ; ²Qualcomm, USA 

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RTu3C-5
14:50







A 56Gb/s Zero-IF D-Band Transmitter for a Beamformer in 22nm FD-SOI

Y. Zhang, K. Vaesen, G. Mangraviti, S. Park, Z. Zong, P. Wambacq, G. Gramegna, imec, Belgium 

RTu4B: mm-Wave and Beyond Radars and Imagers

Chair: Raja Pallela, MaxLinear, USA — Co-Chair: Vito Giannini, UHNDER, USA





151AB, 15:40–17:20, Tuesday, 18 June 2024

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15:40
- A 90–98-GHz FMCW Radar Transceiver Supporting Broadband Modulation in 65nm CMOS**
Shengjie Wang¹, Jiangbo Chen¹, Jiabing Liu¹, Quanyong Li¹, Qizhou Yang¹, Xiaopeng Yu¹, Chunyi Song¹, Qun Jane Gu², Zhiwei Xu¹
¹Zhejiang University, China  ; ²University of California, Davis, USA 
- PAGE 355
RTu4B-2
16:00
- A 200-GHz Modulable Transceiver With 35-dB TX ON/OFF Isolation and 16Gb/s Code Rate for MIMO Radar in 130nm SiGe Process**
Rui Zhou, Jixin Chen, Siyuan Tang, Zekun Li, Dawei Tang, Peigen Zhou, Feng Xie, Zhe Chen, Wei Hong, Southeast University, China 
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RTu4B-3
16:20
- An On-Chip Antenna-Coupled Preamplified D-Band to J-Band Total Power Radiometer Chip in 130 nm SiGe BiCMOS Technology**
Janusz Grzyb¹, Marcel Andree¹, Holger R cker², Ullrich Pfeiffer¹
¹Bergische Universit t Wuppertal, Germany  ; ²IHP, Germany 
- PAGE 363
RTu4B-4
16:40
- An E-Band FMCW Radar Receiver Achieving 38dB Cancellation for Arbitrary-Path Spillover Up to -10dBm and 5.7dB NF in 65nm CMOS**
Bolin Chen, Zhirui Zong, HKUST(GZ), China 

RTu4C: Circuit Building Blocks in the 100–200GHz Frequency Range

Chair: Teerachot Siriburanon, University College Dublin, Ireland — Co-Chair: Rocco Tam, NXP Semiconductors, USA

152AB, 15:40–17:20, Tuesday, 18 June 2024

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15:40
- 110–170GHz 25% Duty-Cycle Gilbert-Cell Frequency Doubler with 6.5dBm Peak Output Power in BiCMOS 55nm Technology**
Lorenzo Piotto, Guglielmo De Filippi, Andrea Mazzanti, Universit  di Pavia, Italy 
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16:00
- A Low Conversion Loss 120GHz Passive IQ Down-Conversion Subharmonic Mixer with Multiphase LO Distribution in 28nm CMOS**
Sarah Koop-Brinkmann¹, Victor Lasserre¹, Michele Caruso², Daniele Dal Maistro², Giovanni Volpato², Christian Ziegler¹, Finn Stapelfeldt¹, Vadim Issakov¹
¹Technische Universit t Braunschweig, Germany  ; ²Infineon Technologies, Austria 
- PAGE 375
RTu4C-3
16:20
- A 200GHz Wideband and Compact Differential LNA Leveraging an Active Balun Input Stage in 16nm FinFET Technology**
Ethan Chou, Nima Baniasadi, Ali Niknejad, University of California, Berkeley, USA 
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RTu4C-4
16:40
- A D-Band Bi-Directional Current-Reuse Common-Gate Amplifier in 45nm RFSOI**
Syed Mohammad Ashab Uddin, Liwen Zhong, Wooram Lee, Pennsylvania State University, USA 